M0510013
TASK 2741

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State of Utah

DEPARTMENT OF NATURAL RESOURCES

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Division of Oil, Gas and Mining

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January 28, 2009

Ed Eyring
Property Reserve, Inc.
5 Triad Center Ste 650
Salt Lake City, UT 84180

Subject: First Review of Notice of Intention to Commence Large Mining Operations, Property Reserve, Inc., Heber Girls Camp Gravel Pit Mine, M05100013, Wasatch County, Utah

Dear Mr. Eyring:

The Division has completed a review of your Notice of Intention to Commence Large Mining Operations for the Heber Girls Camp Gravel Pit Mine, located in Wasatch County, Utah, which was received November 5, 2008. The attached comments will need to be addressed before tentative approval may be granted.

The comments are listed under the applicable Minerals Rule heading; please format your response in a similar fashion. Please address only those items requested in the attached technical review by sending replacement pages of the original mining notice using **redline and strikeout** text, so we can see what changes have been made. After the notice is determined technically complete and we are prepared to issue final approval, we will ask that you send us two clean copies of the complete and corrected plan. Upon final approval of the permit, we will return one copy stamped "approved" for your records.

The Division will suspend further review of the Notice of Intention until your response to this letter is received. If you have any questions in this regard please contact me at 801-538-5261 or, Leslie Heppler (801) 538-5257, Tom Munson (801) 538-5321, or Lynn Kunzler (801) 538-5310 of the Minerals Staff. Thank you for your cooperation in completing this permitting action.

Sincerely,

Paul B. Baker
Minerals Program Manager

PBB;lah:vs
Task #2741
Attachment: Review
P:\GROUPS\MINERALS\WP\M051-Wasatch\M0510013-HeberGirlsCampGravelPit\final\REV1-2741-01262008.doc

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UTAH DNR OIL, GAS & MINING

First REVIEW OF NOTICEOF INTENTION TO COMMENCE LARGE MINING OPERATIONS

Property Reserve, Inc.
Heber Girls Camp Gravel Pit Mine

M0510013
January 26, 2008

General Comments:

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
1	General	Submittal should be formatted to easily incorporate additional revisions and amendments.	lah	

R647-4-104 – Operator's, Surface and Mineral Ownership

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
2	Page 2 –5.	As shown on the map, disturbance is also in the NW ¼ of the SW ¼ of Section 19	lah	

R647-4-105 - Maps, Drawings & Photographs

General Map Comments

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
3	Fig 1-2	Heber Valley Project boundary outline is different on each figure. Please standardize	lah	

Specific Map Comments

105.1 Topographic base map, boundaries, pre-act disturbance

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
4	Fig 2	Where does the telephone line end? As shown?	lah	

105.2 Surface facilities map

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
5	Fig 4 & 5	No surface facilities are shown. If no facilities are planned then it needs to be noted in the NOI. If portable facilities are planned, include temporary locations and specifications in the NOI.	lah	
6	Fig 4	No test borings, pits or core holes are shown. If none are planned, note in the NOI that none are to be done. If any are planned, the locations and specifications need to be included in the NOI.	lah	

105.2 Drawings or Cross Sections (slopes, roads, pads, etc.)

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
7	Page 5 Item c-d	These items are not checked	lah	
8	All Maps	Include a polygon on bonded area on each map	lah	
9	Figure 3	As shown area at 6800' appears to be outside the .dtm limit. Please delete partial lines contour lines, as the lines indicate a re-contour of the area.	lah	
10	Figure 4	It is unusual to stockpile growth medium at the top of the hill. Is the volume known? Is the pile going to be moved?	lah	
11	Figure 5	The 1.75 acres of growth medium is considered disturbance and needs to be included in the bonded area.	lah	
12	Figure 6	More detail will be needed on the storm water plan for the base of the x-section. The Division recommends Figure 6 as a map to include some of the SWPP details.	lah	
13	Figure 7?	Map in pocket 7 is labeled as "Current area of disturbance" and has no label as to the figure number. Has the correct map been submitted to DOGM? Table of Contents lists map as "Reclamation Area."	lah	

105.3 Photographs

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
14	Omission	No photos were included. If a decision is made to include photos, include description of the photos. The Division recommends photo documentation, this is not a requirement.	lah	

R647-4-106 - Operation Plan

General Operation Comments

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
15	Page 6 para 1	Show approximate location of portable equipment, especially less portable equipment like fuel tanks, on a facilities map. For surety calculation purposes, the Division needs information about what facilities will be on site. In the future an amendment can be submitted, if needed as concurrent reclamation is on going.	lah	

106.1 Minerals mined

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
16	106.1	Are any of the Quaternary aged sands and gravels going to be mined?	lah	

106.2 Type of operations conducted, mining method, processing etc.

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
17	Page 6 para 1	An adequate berm should be placed between roadway and mine.	lah	
18	Page 6 para 3	As written "approximately 150 acres...". Total disturbed acres needs to be defined and bonded for. The operator can amend the NOI as needed, but the appropriate change in surety bond will be needed with the new amendment, when the mine plan changes.	lah	
19	Page 6 Para 5	Inert rock does not make satisfactory growth medium. Revise. Inert rock can be used to regrade or contour the site.	lah	
20	Page 7 Para 2	Show mine entrance on map (future amendment can be submitted when main entrance is modified).	lah	
21	Page 7	"Additional Permits..." This section is more appropriate in R647-4-109-Environmental Impacts. Include a place holder in the NOI for the additional permits in the appendix.	lah	
22	Page 8	Runoff control Plan . . .". This section is more appropriate in R647-4-109.1-Impacts to surface and groundwater.		
23	Page 8 Para 5 & 6	As written "most water ...". More information is needed. The Division suggests that you submit the SWPPP at this time, as it will include the information needed for the mining permit, such as sediment control structures. The SWPP plan needs to be designed to control sediment and runoff.	Lah& TM	
24	Page 8 Para 7	Will the containment area be lined with HDPE?	lah	

106.3 Estimated acreages disturbed, reclaimed, annually

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
25	Page 9	Reference which map number. Is it figure 5? Figure 5 lists 25.82 acres for design pit, the maps need to match reported acres in the text.	lah	
26	Page 9	Please list portable process facilities.	lah	

106.5 Existing soil types, location, amount

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
27	Page 13 & 23	Page 13 gives the dimensions of the soil stockpile (holding approximately 16,900 cy of soil). The reclamation cost estimate on page 23 shows only 14,600 cy. Please rectify this discrepancy. Please provide the rationale for determining the amount of soil material available. Given the soil depths from the soil survey data, there should be a significantly larger amount of soil material to stockpile.	lk	
28	Fig. 8	Please provide an appropriate legend for this map. Also, show the location of soil test pits and soil sample locations.	lk	
29	omitted	The NOI lacks specific soil analysis data for the soil materials that will be used for reclamation. At a minimum, the following parameters need to be analyzed for each soil type: texture, pH, EC (conductivity), SAR (sodium absorption ratio), %OM (percent organic matter), Nitrogen, Phosphorus (as P_2O_5), and Potassium (as K_2O). This data is needed to evaluate the need for fertilizer (type and rate) and other soil amendments.	lk	

106.6 Plan for protecting & redepositing soils

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
30	Omission	Please provide plans for protecting stockpiled plant growth materials. Consider berms, signage, and seeding with a quick growing vegetation cover.	lk	
31	Page 18	Please describe how soil will be replaced (type of equipment and depth of replacement).	lk	

106.7 Existing vegetation - species and amount

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
32	Page 9-10	The vegetation description and data presented in the NOI does not match with photos of the area. Vegetation cover of the surrounding hillside (both up and down canyon) show significantly more vegetation than reported. Also, oakbrush is a significant component of the vegetation community, and is not mentioned as one of the common species. It appears that the list of common species is from the NRCS for the soil type, not what is found on-site. Before the Division can accept the vegetation section of the NOI, the description and data will need to be verified.	lk	

106.8 Depth to groundwater, extent of overburden, geology

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
33	Page 11 Para	More info is needed on groundwater. Why are there no OSP (open stand pipe) piezometers? The Division recommends adequate monitoring for an understanding of the ground water regime. If ground water is encountered would it impact the mining operation?	lah	
34	Page 11 Para 3	Is it anticipated that the pluton will be mined? Submit stratigraphic column and a geology map.	lah	

106.9 Location & size of ore, waste, tailings, ponds

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
35	Page 11 Para 4	More description is needed how the topsoil/growth medium will be stockpiled	lah	
36	Page 11 Para 4	Omission – describe the stockpiles	lah	
37	Page 12 Para 1	SWPPP is needed with the hydrologic calculations	lah	

R647-4-107 - Operation Practices

The operation practices listed in the rules are performance standards that must be met during the mine operations, but it is not necessary to address them as part of the plan. The Division included remarks because this section of the plan contains comments.

107.1 Public safety & welfare

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
38	Page 12	Commit to follow all local, state, and federal laws, rules and regulations.	lah	
39	Page 12	Delete "unless the Division grants a variance in writing...." No variances were requested by the operator under R647-4-112	lah	

107.2 Drainages to minimize damage

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
40	Page 12	Include rule number such as 107.1 etc	lah	
41	Page 13 Para 1	"...in order to discourage any runoff"...refer to the requirements in your SWPPP	Lah &TM	

107.3 Erosion control & sediment control

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
42	Page 13 para 2	..."Quarra Quartzite" ...Geology should be consistent with page 11	lah	
43	Page 13 Para 2	"....in soak of water..." refer to the requirements in your SWPPP	lah	

107.5 Suitable soils removed & stored

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
44	Page 13	More detail is needed, What is the volume of soil anticipated?, what is the priority? etc?	lah	

107.6 Concurrent reclamation

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
45	Page 13	More detail is need on concurrent reclamation. How much of the highwall will be exposed before the growth medium is added and the area seeded?	lah	

R647-4-108 - Hole Plugging Requirements

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
46	Page 13	Commit to plug any previous drilled hole or future drill hole according to Rule R647-4-108. As written the statements conflict.	lah	

R647-4-109 - Impact Assessment

109.1 Impacts to surface & groundwater systems

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
47	Page 14	See comment 15 listed above	lah	
48	8	The plan references the fact that during periods of spring runoff or periods of intense or prolonged rainfall, runoff may leave the site and flow along Center Creek Road. The plan also states that during extreme runoff events, runoff may enter the nearby irrigation drainage system and therefore waters of the state. The Division requires that the BMPs (Best Management Practices) be used on site to control storm water and that they be described in the plan. A typical drawing must be submitted showing how the BMPs will be installed and a figure showing where on the ground it will be implemented referencing the BMPs. Temporary BMPs are not recommended for long-term operations, as they are commonly not maintained. The Division recommends the use of berms to direct runoff to small catch basins that can be cleaned out after storm events, since the maintenance of these controls is more predictable. Provide this additional information. This ensures the proposed controls will be effective and there will not be any problems with offsite drainage. Please modify the plan to include a storm water control to prevent water from leaving the site.	TM	

109.4 Slope stability, erosion control, air quality, safety

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
49	Page 14	What is the bedding orientation of the quartzite? Fractures? Jointing?	lah	
50	Page 14	Is any blasting involved?	lah	
51		Please include a copy of the Air Quality Approval Order or correspondence from the Division of Air Quality indicating an Approval Order is not needed.	lah	

109.5 Actions to mitigate any impacts

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
52	omission	Add description into text of what measures will be used to mitigate impacts.	lah	

R647-4-110 - Reclamation Plan

110.2 Roads, highwalls, slopes, drainages, pits, etc., reclaimed

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
53	Page 18	More detail is needed on the haul used to access the top of pit. Describe how it will be contained within the disturbance area.	lah	
54	Page 18	More detail is needed on how the highwall will be reclaimed. (scope schedule)	lah	
55	Page 18	More detail is needed on the 3H:1V slopes, tie to a map and cross section	lah	

110.5 Revegetation planting program

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
56	20, 21	Please describe how much soil material will be replaced (depth) and specific areas that will receive topsoil (show on the reclamation map). Describe how the seedbed will be prepared "as ground engaging equipment moved down the highwall". Fertilization, if needed, needs to be done prior to ripping. Rate of fertilization or addition of other soil amendments needs to be based on site-specific soil analysis (see comments under 106.5), and not on manufactures recommendations. It is questionable that the proposed seed mix and rate of application will provide a permanent, diverse vegetation cover that will meet the post mining land use as required. Please consider reducing the seeding rate of the 3 grass species to 2 lbs/acre PLS and adding Basin wild rye at 2 lbs/ac. Reduce yellow sweet clover to 0.5 lb and alfalfa to 1 lb/ac. Add Pacific aster and western yarrow at 0.1 lb/ac. each. Increase palmer penstemon to 0.5 lb/ac and Lewis flax to 1 lb/ac. Use mountain big sage (*Artemisia tridentata vaseyana*) at 0.1 lb/ac, eliminate 4-wing saltbush, and add Wood's rose at 1.0 lb /ac, serviceberry at 1 lb/ac, and bitterbrush at 1 lb/ac. These rates are for broadcast seeding methods.	Lk	
57	18	Reclaimed slopes need a grading and stabilization plan to prevent erosion and runoff from impacting seedbed preparation and topsoil placement. Other methods that have worked successfully are surface roughness (the plan references this but does not elaborate on how it will be implemented), mulches, complex slopes. A lot of these procedures can be reviewed in Utah's Practical Guide to Reclamation found online at: https://fs.ogm.utah.gov/pub/MINES/Coal_Related/RecMan/Reclamation_Manual.pdf By not having long continuous slopes, it can benefit the revegetation efforts as well control erosion. The slopes in the plan are 1250 feet long at a continuous slope and shape. By changing the shape and slope length in segments, it may benefit the overall stability and look of the final reclamation.	TM	

R647-4-112 – Variance (List all variance requested and make a finding if approving.)

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
58	22	Simply state that "No variance is requested" and delete the rest of the text.	lah	

R647-4-113 – Surety

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
59	23	DOGM has a standardized surety sheet that is to be utilized. Please contact the Division for more information.	lah	
60	23	Bonding is based on a worse case scenario. All columns need the required information. Tanks will need to be removed.	lah	
61	23	As the above listed comments are addressed, the bond calculations will need to reflect the changes in the plan.	~~lah~~	
62	23	The Division recommends that you create a bond map to match reclamation tasks with the bond spreadsheet.	lah	